

Appl. No. 09/741,272  
Atty. Docket No. 8371  
Amdt. Dated September 18, 2003  
Reply to Office Action of March 19, 2003  
Customer No. 27752

*Amendments to the Claims* begin on page 3 of this paper.

*Remarks* begin on page 12 of this paper.

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### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### Listing of Claims:

Claims 1 (canceled).

Claim 2 (canceled).

Claim 3 (canceled).

Claim 4 (canceled).

Claim 5 (canceled).

Claim 6 (canceled).

Claim 7 (canceled).

Claim 8 (canceled).

Claim 9 (canceled).

Claim 10 (canceled).

Claim 11 (canceled).

Claim 12 (canceled).

Claim 13 (canceled).

Claim 14 (canceled).

Claim 15 (canceled).

Claim 16 (canceled).

Claim 17 (canceled).

Claim 19 (canceled).

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Claim 19 (canceled).

Claim 20 (canceled).

Claim 21 (canceled).

Claim 22 (canceled).

Claim 23 (canceled).

Claim 24 (canceled).

Claim 25 (canceled).

Claim 26 (canceled).

Claim 27 (canceled).

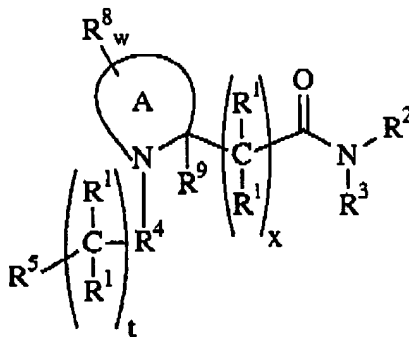
Claim 28 (canceled).

Claim 29 (canceled).

Claim 30 (canceled).

Claim 31 (canceled).

Claim 32 (new) A compound having the structure:



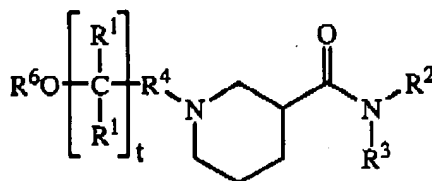
or an optical isomer, diastereomer, enantiomer, pharmaceutically-acceptable salt, wherein:

- (a)  $w$  is 0 to 6,  $x$  is 0 to 10, and  $t$  is 0 to 6;
- (b)  $A$  is a substituted heterocyclic group having 4 to 9 members;

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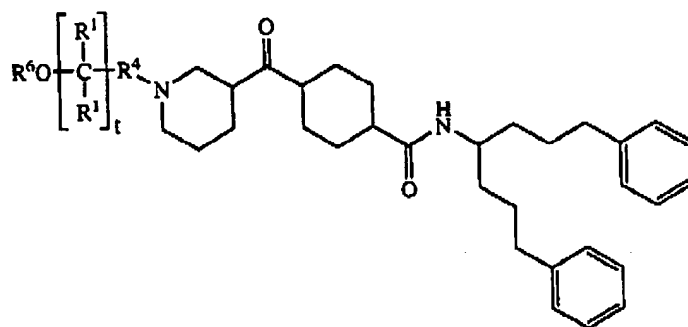
- (c)  $R^1$  is selected from the group consisting of a hydrogen atom, a hydroxy group, a hydrocarbon group, a substituted hydrocarbon group, a heterogeneous group, a substituted heterogeneous group, a carbocyclic group, a substituted carbocyclic group, a heterocyclic group, a substituted heterocyclic group, an aromatic group, a substituted aromatic group, a heteroaromatic group, and a substituted heteroaromatic group;
- (d)  $R^2$  and  $R^3$  are bonded together to form a substituted piperidyl group;
- (e)  $R^4$  is selected from the group consisting of  $-\text{CH}(R^1)-$ ;
- (f)  $R^5$  is selected from the group consisting of  $-\text{NR}^6(\text{R}^7)-$  and  $-\text{O}_r\text{R}^6-$ ; wherein  $r$  is equal to 1;
- (g)  $R^6$  is selected from the group consisting of a hydrocarbon group, a substituted hydrocarbon group, a heterogeneous group, a substituted heterogeneous group, a carbocyclic group, a substituted carbocyclic group, a heterocyclic group, a substituted heterocyclic group, an aromatic group, a substituted aromatic group, a heteroaromatic group, and a substituted heteroaromatic group;
- (h)  $R^7$  is selected from the group consisting of a hydrogen atom and  $R^6$ ;
- (i)  $R^8$  is selected from the group consisting of a hydrocarbon group, a substituted hydrocarbon group, a heterogeneous group, a substituted heterogeneous group, a carbocyclic group, a substituted carbocyclic group, a heterocyclic group, a substituted heterocyclic group, an aromatic group, a substituted aromatic group, and a substituted heteroaromatic group; and,
- (j)  $R^9$  is selected from the group consisting of a hydrogen atom or a hydrocarbon group.

33. (new) A compound according to Claim 32 having the formula:

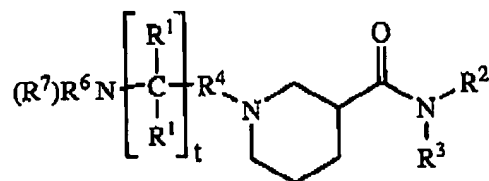


34. (new) A compound according to Claim 33 having the formula:

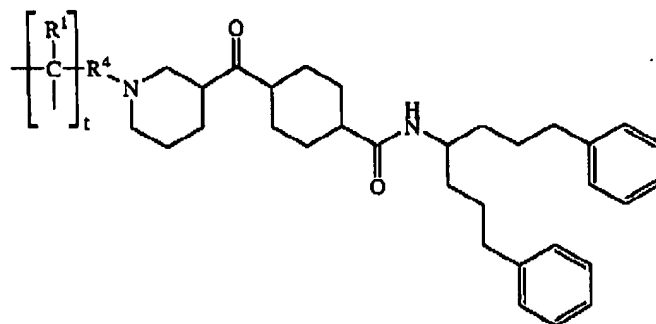
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35. (new) A compound according to Claim 32 having the formula:



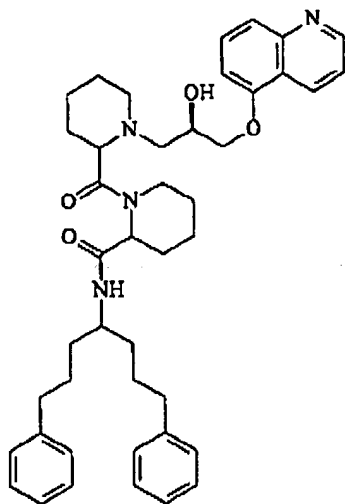
36. (new) A compound according to Claim 35 having the formula:



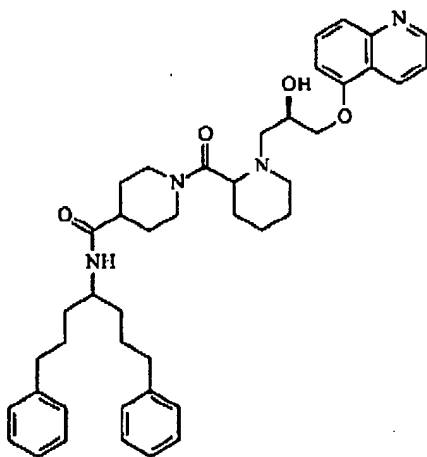
37. (new) A compound having the formula:

i)

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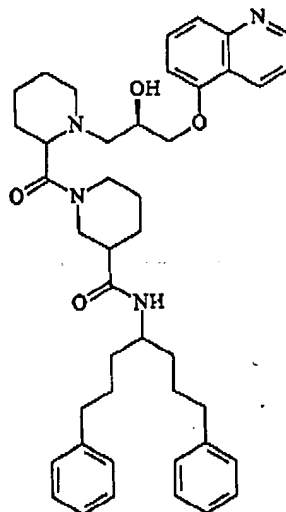
ii)



; or

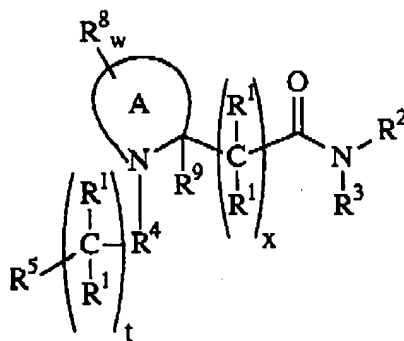
iii)

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38. (new) A composition comprising:

a) one or more compounds having the formula:



or an optical isomer, diastereomer, enantiomer, pharmaceutically-acceptable salt, wherein:

- (a) w is 0 to 6, x is 0 to 10, and t is 0 to 6;
- (b) A is a substituted heterocyclic group having 4 to 9 members;
- (c) R<sup>1</sup> is selected from the group consisting of a hydrogen atom, a hydroxy group, a hydrocarbon group, a substituted hydrocarbon group, a heterogeneous group, a substituted heterogeneous group, a carbocyclic group, a substituted carbocyclic

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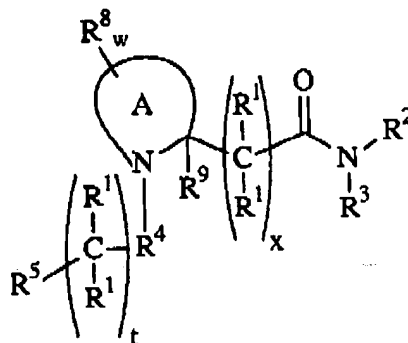
- group, a heterocyclic group, a substituted heterocyclic group, an aromatic group, a substituted aromatic group, a heteroaromatic group, and a substituted heteroaromatic group;
- (d)  $R^2$  and  $R^3$  are bonded together to form a substituted piperidyl group;
- (e)  $R^4$  is selected from the group consisting of  $-\text{CH}(R^1)-$ ;
- (f)  $R^5$  is selected from the group consisting of  $-\text{NR}^6(\text{R}^7)-$  and  $-\text{O},\text{R}^6-$ , wherein  $r$  is equal to 1;
- (g)  $R^6$  is selected from the group consisting of a hydrocarbon group, a substituted hydrocarbon group, a heterogenous group, a substituted heterogeneous group, a carbocyclic group, a substituted carbocyclic group, a heterocyclic group, a substituted heterocyclic group, an aromatic group, a substituted aromatic group, a heteroaromatic group, and a substituted heteroaromatic group;
- (h)  $R^7$  is selected from the group consisting of a hydrogen atom and  $R^6$ ;
- (i)  $R^8$  is selected from the group consisting of a hydrocarbon group, a substituted hydrocarbon group, a heterogeneous group, a substituted heterogeneous group, a carbocyclic group, a substituted carbocyclic group, a heterocyclic group, a substituted heterocyclic group, an aromatic group, a substituted aromatic group, and a substituted heteroaromatic group; and,
- (j)  $R^9$  is selected from the group consisting of a hydrogen atom or a hydrocarbon group; and,
- (b) a pharmaceutically acceptable carrier.

39. (new) A method for treating multidrug resistance, said method comprising the step of administering to a human or mammal an effective amount of a composition comprising:

- a) one or more compounds having the formula:



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or an optical isomer, diastereomer, enantiomer, pharmaceutically-acceptable salt thereof, wherein:

- (a) w is 0 to 6, x is 0 to 10, and t is 0 to 6;
- (b) A is a substituted heterocyclic group having 4 to 9 members;
- (c) R<sup>1</sup> is selected from the group consisting of a hydrogen atom, a hydroxy group, a hydrocarbon group, a substituted hydrocarbon group, a heterogeneous group, a substituted heterogeneous group, a carbocyclic group, a substituted carbocyclic group, a heterocyclic group, a substituted heterocyclic group, an aromatic group, a substituted aromatic group, a heteroaromatic group, and a substituted heteroaromatic group;
- (d) R<sup>2</sup> and R<sup>3</sup> are bonded together to form a substituted piperidyl group;
- (e) R<sup>4</sup> is selected from the group consisting of -CH(R<sup>1</sup>)-;
- (f) R<sup>5</sup> is selected from the group consisting of -NR<sup>6</sup>(R<sup>7</sup>)- and -OR<sup>6</sup>-, wherein r is equal to 1;
- (g) R<sup>6</sup> is selected from the group consisting of a hydrocarbon group, a substituted hydrocarbon group, a heterogeneous group, a substituted heterogeneous group, a carbocyclic group, a substituted carbocyclic group, a heterocyclic group, a substituted heterocyclic group, an aromatic group, a substituted aromatic group, a heteroaromatic group, and a substituted heteroaromatic group;
- (h) R<sup>7</sup> is selected from the group consisting of a hydrogen atom and R<sup>6</sup>;
- (i) R<sup>8</sup> is selected from the group consisting of a hydrocarbon group, a substituted hydrocarbon group, a heterogeneous group, a substituted heterogeneous group, a carbocyclic group, a substituted carbocyclic group, a heterocyclic group, a substituted heterocyclic group, an aromatic group, a substituted aromatic group, and a substituted heteroaromatic group;

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- (j)  $R^9$  is selected from the group consisting of a hydrogen atom or a hydrocarbon group; and,
- (b) a pharmaceutically acceptable carrier.